## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

- 1-21. (Canceled).
- 22. (Previously presented) A polythioether comprising:

$$H - S - R^1 - [ -S - (CH_2)_p - O - (-R^2 - O -)_m - (CH_2)_q - S - R^1 - ]_n - S - H$$

wherein

 $R^1$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and a  $-[(-CH_2)_p-X]_q-(-CH_2)_r$  group;

 $R^2$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and  $C_{6-8}$  cycloalkylene;

X is selected from the group consisting of O and S;

m is an integer between 0 and 10;

p is an integer between 2 and 6;

q is an integer between 1 and 5;

r is an integer between 2 and 10; and

n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

- 23. (Previously presented) The polythioether of claim 22 wherein R<sup>1</sup> is C<sub>2</sub>-C<sub>6</sub> n-alkylene.
- 24. (Previously presented) The polythioether of claim 22 where  $R^1$  is  $-[(-CH_2-)_p-O-]_q-(-CH_2-)_r$  where r, p, and q are 2.

- 25. (Currently amended) The polythioether of claim 22 wherein  $R^2$  is  $C_2$  alkyleneoxy.
- 26. (Previously presented) The polythioether of claim 22 wherein the molecular weight of said polythioether ranges from about 2000 to about 5000 Daltons.
- 27. (Previously presented) The polythioether of claim 22 having an atomic percentage ratio of C:S:O of 35-49: 20-60: 0-20.

28-30. (Canceled)

31. (Previously presented) A mixture of polythioether polymers comprising:a polythioether polymer having the formula

B-
$$\{-S-R^1-[-S-(CH_2)_p-O-(R^2-O)_m-(CH_2)_q-S-R^1]_n-S-H\}_z$$

wherein

 $R^1$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and a  $-[(-CH_2)_p-X]_q-(-CH_2)_r$  group;

 $R^2$  is selected from the group consisting of  $C_{2\text{-}6}$  n-alkylene, and  $C_{6\text{-}8}$  cycloalkylene;

X is selected from the group consisting of O and S;

m is an integer between 1 and 10;

p is an integer between 2 and 6;

q is an integer between 1 and 5;

r is an integer between 2 and 10;

z is an integer from 3 to 6;

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B is a z-valent group of a polyfunctionalizing agent; and n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

- 32. (Previously presented) The polythioether mixture of claim 31 wherein z is 3.
- 33. (Previously presented) The polythioether mixture of claim 31 wherein the mixture has an average functionality between 3 and 4.
- 34. (Previously presented) The polythioether mixture of claim 33 wherein the average functionality is between 2.05 and 3.00.
- 35. (Previously presented) A curable composition comprising:40 to 80 weight percent of a polythioether polymer according to claim 22,5 to 60 weight percent of a filler and 10 weight percent of a curing agent.
- 36. (Previously presented) The curable composition of claim 35 further comprising one or more additives selected from the group consisting of: pigments, cure accelerators, adhesion promoters, thixotropic agents and isopropyl alcohol.

37-40. (Canceled).

- 41. (New) The polythioether of claim 22, wherein r is an integer between 2 and 6,  $R^2$  is  $C_{2-6}$  n-alkylene, and m, p and q are each 2.
- 42. (New) The polythioether mixture of claim 31, wherein, r is an integer between 2 and 6,  $R^2$  is  $C_{2-6}$  n-alkylene, and m, p and q are each 2.
- 43. (New) A curable composition comprising: 40 to 80 weight percent of a polythioether polymer according to claim 41, 5 to 60 weight percent of a filler and 10 weight percent of a curing agent.